

Original Research Article

Polycystic ovarian syndrome: affecting quality of life and awaiting cure

Shikha Mathur*

Department of Obstetrics and Gynaecology, Urban Community Health Centre, Ajmer, Rajasthan, India

Received: 25 November 2025

Revised: 09 December 2025

Accepted: 10 December 2025

*Correspondence:

Dr. Shikha Mathur,

E-mail: mathurmm0021@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: The increasing number of polycystic ovarian syndrome (PCOS) patients in gynaecology outdoor especially younger adults, with long term health implications prompts us to study the condition. The syndrome not only has a vast impact on physical health but also affects psychosocial aspects of life. The study aimed to analyse the characteristics and presenting complaints in subjects with PCOS.

Methods: It was an observational study conducted at a secondary care centre over a period of one year. Chi square goodness of fit test was used to analyse the results.

Results: The study showed an increased incidence in younger adults with menstrual irregularity as the most common complaint and an increased body mass index (BMI) amongst most patients. Inability to conceive without treatment was also very important presenting feature.

Conclusions: We should increase our efforts to find a preventive strategy and if possible, a cure to this syndrome.

Keywords: Polycystic ovarian syndrome, BMI, Hyperandrogenism, Oligo/anovulation, Hirsutism

INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the most common endocrinopathy in women worldwide affecting one out of eight regardless of ethnic background.^{1,2} The modern era has noticed an increase in number of adolescents attending gynaecological outdoor with complaints pertaining to menstrual problems. The most common cause of menstrual irregularities and hyperandrogenism is PCOS. It is the most common cause of female infertility.³

The diagnosis is made according to Revised Rotterdam criteria 2003. It is recommended to use the Revised Rotterdam criteria in which PCOS may be diagnosed if any two of the following are present-clinical or biochemical hyperandrogenism, evidence of oligo-anovulation and polycystic appearing ovarian morphology on ultrasound with exclusion of other relevant disorders.⁴ Biochemical hyperandrogenism should be defined by elevated total or free testosterone measured by high quality assays such as liquid chromatography, mass spectrometry and extraction/chromatography. Clinical hyperandrogenism should be

evaluated by trained person and be quantified using modified Ferri Man-Galway score. The threshold used for abnormal may vary based on patient population from more than equal to 4 to more than equal to 8. Oligomenorrhoea cycles more than 35 days apart or less than 8 cycles per year may be used as a marker for ovulatory dysfunction to diagnose PCOS. PCO morphology should be defined as either more than equal to 20 follicles per ovary and or ovarian volume more than equal to 10 cm cube on either ovary using newer transvaginal ultrasound technology with a transducer frequency of 8 megahertz or more.⁵ The criteria recognize that PCOS is a diagnosis of the exclusion.⁶

METHODS

The objective of the study was the analysis of the characteristics and presenting complaints in subjects suffering from PCOS.

The study was an observational study conducted at the Urban Community Health Care Centre (Panchsheel) in

Ajmer over a period of 1 year (October 2024-september 2025).

A total number of 100 females falling in the age group of 15-50 years with a final diagnosis of PCOS as per the Rotterdam criteria were included in the study. Subjects willing to participate and cooperate were only included in the study and they were prior informed that the information shall be used only for research purpose and will not be shared with anyone further. Females with severe diseases like diabetes mellitus, cardiac diseases, seizure disorder and severe hypertension, pregnancy were not included in the study. First the weight and height of the subjects was measured with a digital weighing scale and standardized stadiometer respectively. Further BMI calculations were done to assess the nutritional status of the subjects.

In order to assess the presenting features of PCOS in the subjects under study a questionnaire was prepared in advance. The subjects were then enquired for the presence of different characteristic features so as to arrive at the conclusions. The most common features of PCOS were included like menstrual irregularity, hirsutism, inability to conceive, weight gain. Further statistical analysis was carried out using Chi square goodness of fit test and Hierarchical cluster analysis. The percentage prevalence of different phenotypic features was also calculated.

RESULTS

In our study age distribution showed maximum incidence of PCOS, 33% in age group of more than twenty years and less than twenty-five years of age as shown in table 1. Applying the Chi square goodness of fit test on the age distribution we see that the age distribution is not consistent with uniform distribution indicating a statistically significant difference between the observed and expected frequencies with a p value of less than 0.05.

In the study, the Body mass index value categorized 34% of the subjects as overweight and 30% of the subjects as obese (Table 3). The results of Chi square goodness of fit test indicate that the body mass index distribution of the study subjects is not consistent with uniform distribution with the p value less than 0.05, this suggests that the study population has a higher prevalence of overweight and obese subjects. The median BMI is twenty-seven-point one kilogram per meters square, and the mean BMI is twenty-seven point two kilograms per meter square.

In our study, most of the subjects presented with menstrual irregularities, followed by menstrual irregularities with weight gain and facial hair (Table 4). On applying the Hierarchical clustering analysis test, we identified 3 clusters, cluster one, presenting with menstrual irregularities, cluster two presenting with either menstrual regularities and facial hair or with menstrual irregularities with weight gain and facial hair or cluster three, presenting with either inability to conceive or menstrual regularities with inability to conceive. Menstrual irregularities is a

common presentation. Cluster one represents subjects with mild symptoms, cluster two subjects with moderate symptoms and cluster three severe symptoms. These clusters can inform future research studies on PCOS, phenotype and treatment outcomes. They can help identify potential biomarkers for prediction of treatment response. In our study out of the 66 married subjects, 30.30% of the patients presented with inability to conceive and 19.69% of the patients conceived with treatment Table 5.

Table 1: Age distribution of PCOS subjects, (n=100).

Age (in years)	N
≥15 to <20	28
≥20 to <25	33
≥25 to <30	18
≥30 to <35	9
≥35 to <40	7
≥40 to <45	5
≥45	0

Table 2: Marital status of subjects, (n=100).

Marital status	N
Unmarried	34
Married	66

Table 3: BMI distribution of subjects, (n=100).

BMI of subjects (kg/m ²)	N
<18.5	14
≥18.5-24.9	22
25-29.9	34
≥30	30

Table 4: Distribution of subjects according to presenting features, (n=100).

Presenting features	N
Menstrual irregularities	33
Menstrual irregularities with facial hair	18
Menstrual irregularities with weight gain with facial hair	29
Inability to conceive	13
Menstrual irregularities with inability to conceive	7

Table 5: Obstetric history of married subjects, (n=66).

Obstetric history	N
Primary infertility	20
Previous abortion with no live birth	18
Previous live birth with treatment	13
Previous live birth without treatment	9
Previous two live births without treatment	6

DISCUSSION

In our study the age distribution showed maximum incidence of 33% in age group of more than 18 years and less than 25 years of age. In a study by Agarwal et al 80% of PCOS patients were in the age group of 35 to 40 years, 16.6% in 40 to 60 years age group and 2.78% patients more than 60 years of age.⁷ Women who are overweight or obese have a higher incidence of this disease compared to their lean counterparts.⁸ The study shows that the most common presenting complaint were menstrual abnormality alone in 33% followed by 27% presenting with menstrual irregularities and with facial hair. Increased androgen levels can lead to excessive hair growth specially on face, chest, back or abdomen. Excessive hair growth known as hirsutism can affect 85 to 90% of women with PCOS.⁹ According to a study by Teede et al in adolescents both hyperandrogenism and ovulatory dysfunction are required with ultrasound and AMH not recommended due to poor specificity.¹⁰ A study by Shi et al shows that hyperandrogenism is the most common symptom of PCOS.¹¹ Evidence suggests that PCOS phenotype vary widely and is most commonly observed in the post pubertal period.¹²

Limitations

As the study was conducted at a secondary care centre the diagnostic tests could not be at the centre itself. No further study on the impact of the treatment given to the subjects could be done.

CONCLUSION

The present research study is in consensus with earlier research studies that menstrual irregularities, hirsutism, failure to conceive, weight gain are the most common features in subjects suffering from PCOS. The present scenario is witnessing an increase in number of younger girls including adolescents presenting to the outdoor for gynaecological problems most of whom end up the with a diagnosis of PCOS. This starts a cycle of long-term treatment not reaching a cure point and with long term implications on future health. We are yet to find a successful treatment and if possible, prevention strategy to PCOS.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Bozdag G, Mumusoglu S, Zengin D, Karabulut E, Yildiz BO. The prevalence and phenotypic features of

- polycystic ovary syndrome: a systematic review and meta-analysis. *Hum Reprod.* 2016;31(12):2841-55.
2. Mousa A, Tay CT, Teede H. Technical Report for the 2023 International Evidence based guideline for the assessment and management of polycystic ovarian syndrome. Monash University. 2023.
 3. Andhalkar S, Chaware V, Redasani V. A Review on Medicinal Plants of Natural Origin for Treatment of Polycystic Ovarian Syndrome (PCOS). *Asian J Pharmaceut Res Develop.* 2021;9(3):76-81.
 4. Dumesic DA, Oberfield SE, Stener-Victorin E, Marshall JC, Laven JS, Legro RS. Scientific Statement on the Diagnostic Criteria, Epidemiology, Pathophysiology, and Molecular Genetics of Polycystic Ovary Syndrome. *Endocr Rev.* 2015;36(5):487-525.
 5. Christ JP, Cedars MI. Current Guidelines for Diagnosing PCOS. *Diagnostics (Basel).* 2023;13(6):1113.
 6. Ikeda K, Baba T, Morishita M, Honnma H, Endo T, Kiya T, et al. Long-term treatment with dehydroepiandrosterone may lead to follicular atresia through interaction with anti-Mullerian hormone. *J Ovarian Res.* 2014;7:46.
 7. Agarwal M, Sinha S, Lohani P, Singh R, Dureja S. Polycystic Ovarian Syndrome in Aging Women: An Observational Study. *Cureus.* 2022;14(9):e29776.
 8. Echiburú B, Pérez-Bravo F, Galgani JE, Sandoval D, Saldías C, Crisosto N, et al. Enlarged adipocytes in subcutaneous adipose tissue associated to hyperandrogenism and visceral adipose tissue volume in women with polycystic ovary syndrome. *Steroids.* 2018;130:15-21.
 9. Mirmasoumi G, Fazilati M, Foroozanfard F, Vahedpoor Z, Mahmoodi S, Taghizadeh M, et al. The Effects of Flaxseed Oil Omega-3 Fatty Acids Supplementation on Metabolic Status of Patients with Polycystic Ovary Syndrome: A Randomized, Double-Blind, Placebo-Controlled Trial. *Exp Clin Endocrinol Diabetes.* 2018;126(4):222-8.
 10. Teede HJ, Tay CT, Laven JJE, Dokras A, Moran LJ, Piltonen TT, et al. Recommendations from the 2023 International Evidence Based guideline for the Assessment and Management of Polycystic Ovarian Syndrome. *J Clin Endocrinol Metab.* 2023;108(10):2447-69.
 11. Shi D, Vine DF. Animal models of polycystic ovary syndrome: a focused review of rodent models in relationship to clinical phenotypes and cardiometabolic risk. Alberta Institute for Human Nutrition, Metabolic and Cardiovascular Disease Laboratory, University of Alberta, Edmonton, Alberta, Canada. 2009.
 12. Spritzer PM. Polycystic ovary syndrome: Reviewing diagnosis and management of metabolic disturbances. *Arq Bras Endocrinol Metabol.* 2014;58(2):182-7.

Cite this article as: Mathur S. Polycystic ovarian syndrome: affecting quality of life and awaiting cure. *Int J Res Med Sci* 2026;14:62-4.